

I. AMENDMENT

IN THE CLAIMS:

Please amend claim 8 as follows:

8. A method for decoding a received point to a corresponding point in a constellation of points, the received point and each point in the constellation having a number of bits, the method comprising:

determining a reference point corresponding to the point in the constellation that is nearest the received point;

determining at least one concurrent point corresponding to the point in the constellation of points nearest the reference point having a selected bit that is the complement of the corresponding bit of the reference point, with the bits of the concurrent point being determined as a function of the bits in the reference point and a rank associated with the selected bit; and

determining a decoded point corresponding to the decoded received point, the decoded point being determined as a function of the received point, the reference point, and the concurrent point.

Please amend claim 15 as follows:

15. A decoding device, comprising:

a receiver adapted to receive a modulated signal and operable to generate a received data word from the modulated signal, the received data word having a number of bits;

a reference data word generator coupled to the receiver and operable to generate a reference data word derived from the received data word and a constellation of points;

a concurrent data word generator coupled to the reference data word generator and operable to generate at least one concurrent data word point as a

function of the bits in the reference data word and a position of a selected bit in the reference data word; and

a decoded word generator coupled to the receiver, reference data word generator, and concurrent data word generator, the decoded word generator operable to generate a decoded word as a function of the received data word, the reference data word, and the concurrent data word.

Please amend claim 18 as follows:

18. An electronic system, comprising:

a decoding device including,

a receiver adapted to receive a modulated signal and operable to generate a received data word from the modulated signal, the received data word having a number of bits;

a reference data word generator coupled to the receiver and operable to generate a reference data word derived from the received data word and a constellation of points;

a concurrent data word generator coupled to the reference data word generator and operable to generate at least one concurrent data word point as a function of the bits in the reference data word and a position of a selected bit in the reference data word; and

a decoded word generator coupled to the receiver, reference data word generator, and concurrent data word generator, the decoded word generator operable to generate a decoded word as a function of the received data word, the reference data word, and the concurrent data word.